AMENDMENTS TO THE CLAIMS

This listing of claims supersedes all prior versions and listings of claims in this application:

LISTING OF CLAIMS:

1. (currently amended): A method of sending first and second signals to a plurality of user equipments, the method comprising ~~the steps of~~:

providing ~~of~~ a dedicated channel for each one of the plurality of user equipments,

assigning a carrier frequency of a set of at least first and second carrier frequencies to each one of the dedicated channels,

providing ~~of~~ a code-multiplexed shared channel for the plurality of user equipments,

sending ~~of~~ one of the first signals to one of the plurality of user equipments on the dedicated channel of that user equipment on the assigned carrier frequency by applying a transmit diversity scheme,

sending ~~of~~ one of the second signals to one of the plurality of user equipments on the code-multiplexed shared channel on ~~the~~ a carrier frequency ~~being~~ assigned to that user equipment by applying a multi-user diversity scheme.

2. (currently amended): The method of claim 1, wherein the dedicated channels ~~being~~ is a DSCH type channels and the code-multiplexed shared channel ~~being~~ is a HS-DSCH type channel of a HSDPA type transmission system.

3. (currently amended): The method of claim 1, ~~whereby~~ wherein the sending ~~of~~ the one of the first signals and the one of the second signals is performed by means of first and second multi-carrier power amplifiers being coupled to first and second antennas, the first and second multi-carrier amplifiers having at least the first and the second carrier frequencies.

4. (currently amended): The method of claim 1, wherein the set of carrier frequencies having a number of n carrier frequencies.

5. (currently amended): A computer program product~~, in particular digital storage device,~~ having program means for sending of first and second signals to a plurality of user equipments, the program means ~~being adapted to perform~~ performing the steps of:

providing ~~of~~ a dedicated channel for each one of the plurality of user equipments,

assigning a carrier frequency of a set of at least first and second carrier frequencies to each one of the dedicated channels,

providing ~~of~~ a code-multiplexed shared channel for the plurality of user equipments,

sending ~~of~~ one of the first signals to one of the plurality of user equipments on the dedicated channel of that user equipment on the assigned carrier frequency by applying a transmit diversity scheme,

sending ~~of~~ one of the second signals to one of the plurality of user equipments on the code-multiplexed shared channel on the carrier frequency being assigned to that user equipment by applying a multi-user diversity scheme.

6. (currently amended): A sender for sending of first and second signals to a plurality of user equipments, the sender comprising:

a first component ~~for providing of~~ which provides a dedicated channel for each one of the plurality of user equipments,

a second component which assigns ~~for assigning~~ a carrier frequency of a set of at least first and second carrier frequencies to each one of the dedicated channels,

a third component ~~for providing of~~ which provides a code-multiplexed shared channel for the plurality of user equipments,

a fourth component ~~for sending of~~ which sends one of the first signals to one of the plurality of user equipments on the dedicated channel of that user equipment on the assigned carrier frequency by applying a transmit diversity scheme,

a fifth component ~~for sending of~~ which sends one of the second signals to one of the plurality of user equipments on the code-multiplexed shared channel on the carrier frequency being assigned to that user equipment by applying a multi-user diversity scheme.

7. (currently amended): The sender of claim 6 further comprising scheduler ~~means for providing~~which provides the multi-user diversity for the code-multiplexed shared channel for sending of one of the second signals only when a constructive channel fade is detected.

8. (currently amended): The sender of claim 6, wherein the fourth component ~~for sending of~~ which sends the one of the first signals and the fifth component ~~for sending of~~ which sends the one of the second signals ~~being~~ are provided by first and second multi-carrier amplifier components being coupled to first and second antenna components, the first and second multi-carrier amplifiers having at least the first and the second frequencies.

9. (currently amended): The sender of claim 6, wherein the set of carrier frequencies having a number of n carrier frequencies.

10. (currently amended): A mobile cellular telecommunication system for sending of first and second signals to a plurality of user equipments within a cell, the telecommunication system comprising:

a first component ~~for providing of~~which provides a dedicated channel for each one of the plurality of user equipments,

a second component ~~for assigning~~which assigns a carrier frequency of a set of at least first and second carrier frequencies to each one of the dedicated channels,

a third component ~~for providing of~~ which provides a code-multiplexed shared channel for the plurality of user equipments,

a fourth component ~~for sending of~~ which sends one of the first signals to one of the plurality of user equipments on the dedicated channel of that user equipment on the assigned carrier frequency by applying a transmit diversity scheme,

a fifth component ~~for sending of~~ which sends one of the second signals to one of the plurality of user equipments on the code-multiplexed shared channel on the carrier frequency being assigned to that user equipment by applying a multi-user diversity scheme.